

IN THE CLAIMS

1-22. (Canceled)

23. (New) A method for transferring data within a storage system, comprising the steps of:

reading current data;

referring to a staging information table that includes information which indicates the direction of pre-reading and the data volume of pre-reading, while the current data is being read; and

staging the current data to a cache memory in accordance with the information referenced in the step of referring to the staging information table.

24. (New) A method as claimed in claim 23, further comprising the steps of:

generating redundant data from a plurality of data;

managing the redundant data and the data from which the redundant data is generated as a parity group; and

restoring the current data from the redundant data and from the data from which the redundant data is generated in the event of a data read failure.

25. (New) A method as claimed in claim 24, wherein said step of referring to the staging information table further refers to information in the staging information table indicating whether said redundant data is to be read, regardless of whether the current data is successfully read in said reading step.

26. (New) A method as claimed in claim 25, wherein said step of referring to the staging information table further refers to a redundant data staging execution flag that indicates whether said redundant data is to be read.

27. (New) A method as claimed in claim 26, wherein, if said redundant data staging execution flag indicates that said redundant data is to be read, data in the parity group containing said current data is read.

28. (New) A method as claimed in claim 26, further comprising the step, performed by a user, of setting the redundant data staging execution flag in said staging information table.

29. (New) A method as claimed in claim 26, further comprising the step, performed by an electronic controller, of setting the redundant data staging execution flag in said staging information table in response to a command.

30. (New) A method as claimed in claim 25, wherein said step of referring to the staging information table further refers to a pre-read staging execution flag that indicates whether successive data to said current data is also to be read, in response to a command.

31. (New) A method as claimed in claim 30, wherein, if said pre-read staging execution flag indicates that said pre-read staging is to be executed when the current data is read, forward successive data to the current data is read.

32. (New) A method as claimed in claim 30, wherein, if said pre-read staging execution flag indicates that said pre-read staging is to be executed when the current data is read, backward successive data to the current data is read.

33. (New) A method as claimed in claim 30, wherein, if said pre-read staging execution flag indicates that said pre-read staging is to be executed when the current data is read, forward and backward successive data to the current data is read.

34. (New) A method as claimed in claim 30, further comprising the step, performed by a user, of setting the pre-read staging execution flag in said staging information table.

35. (New) A method as claimed in claim 30, further comprising the step, performed by an electronic controller, of setting the pre-read staging execution flag in said staging information table in response to a command.

36. (New) A method as claimed in claim 23, wherein said step of referring to the staging information table further refers to information in the staging information table indicating whether redundant data to said current data is to be read, regardless of whether the current data is successfully read in said reading step.

37. (New) A method as claimed in claim 36, wherein said step of referring to the staging information table further refers to a redundant data staging execution flag that indicates whether said redundant data is to be read.

38. (New) A method as claimed in claim 36, further comprising the step, performed by a user, of setting the redundant data staging execution flag in said staging information table.

39. (New) A method as claimed in claim 36, further comprising the step, performed by an electronic controller, of setting the redundant data staging execution flag in said staging information table in response to a command.

40. (New) A method as claimed in claim 23, wherein said reading step is performed so that successive data to said current data is also read when said current data is read.

41. (New) A method as claimed in claim 40, wherein said reading step is performed so that forward successive data to the current data is also read when said current data is read.

42. (New) A method as claimed in claim 40, wherein said reading step is performed so that backward successive data to the current data is also read when said current data is read.

43. (New) A method as claimed in claim 40, wherein said reading step is performed so that forward and backward successive data to the current data is also read when said current data is read.

44. (New) A method as claimed in claim 40, further comprising the step, performed by a user, of setting the pre-read staging execution flag in said staging information table.

45. (New) A method as claimed in claim 40, further comprising the step, performed by an electronic controller, of setting the pre-read staging execution flag in said staging information table in response to a command.

46. (New) A method as claimed in claim 23, wherein said step of referring to the staging information table further refers to a pre-read staging execution flag that indicates whether successive data to said current data is also to be read, in response to a command.

47. (New) A method as claimed in claim 46, wherein, if said pre-read staging execution flag indicates that said pre-read staging is to be executed when the current data is read, forward successive data to the current data is read.

48. (New) A method as claimed in claim 46, wherein, if said pre-read staging execution flag indicates that said pre-read staging is to be executed when the current data is read, backward successive data to the current data is read.

49. (New) A method as claimed in claim 46, wherein, if said pre-read staging execution flag indicates that said pre-read staging is to be executed when the current data is read, forward and backward successive data to the current data is read.

50. (New) A method as claimed in claim 46, further comprising the step, performed by a user, of setting the pre-read staging execution flag in said staging information table.

51. (New) A method as claimed in claim 46, further comprising the step, performed by an electronic controller, of setting the pre-read staging execution flag in said staging information table in response to a command.